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DISPUTE IN THE PRINTING INDUSTRY

While the present dispute in the printing industry continues, production of *The Mining Journal* is severely hampered. The size of each issue will continue to be governed by current circumstances, and certain regular features may have to be curtailed or omitted. From time to time there may also be some delay in distribution.

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When the Uranium Contracts Expire

THE quite embarrassing success of the American procurement programme, coupled with a slower growth of civilian demand than had been earlier foreseen, have led to temporary over-production of uranium, and for the time being both the U.S. Atomic Energy Authority and the U.S. Atomic Energy Commission are suffering from a state of contractual indigestion.

It has been apparent for some time that the critical period for the uranium mining industry would come after the conclusion, in the mid 1960's, of the numerous government contracts without which it would have been impossible for the industry to develop at such a rapid pace. The U.K. Atomic Energy Authority in its annual report for 1958-1959 states that the present over-supply of uranium is likely to persist at least until the late 1960's. This is in broad agreement with the conclusion reached in the article, "Uranium: Surplus or Deficit?", published in our issue of January 30, 1959 (pp119-121), namely that during the period 1959-64 inclusive, an excess supply might be expected to build up, and that this surplus should be absorbed by 1970 as demand continued to rise.

At this anxious period for the uranium industry one looks in vain to the A.E.A.'s annual report for any indication of the Authority's probable requirements when existing contracts expire, or for any reassurance that future buying policy will take into consideration the importance of maintaining a flourishing industry capable of keeping the Commonwealth adequately supplied in the 1970's and afterwards, when demand has once more overtaken supply — a possibility which can by no means be excluded at this early stage in the development of atomic power.

The A.E.A. states categorically that the uranium requirements of the Free World's current military and civil programmes can now be met by mines already in production. In fact, adequate orders may not be available to keep all existing producers in operation throughout this period, despite the rising demand which may be expected from the accelerating expansion in the utilisation of atomic power. In reply to a question at a recent Press conference it was stated bluntly that the more efficient producers should be able to carry on — the less efficient might be compelled to close down.

On the subject of price, the A.E.A. points out that, with the change to a buyers' market, and the consequent competition to secure the limited orders likely to be available, the forward price for additional supplies of uranium must clearly fall. It now seems likely, continues the report, that the forward price will fall even lower than $8 per lb., which was, until recently, the price guaranteed by the U.S. Atomic Energy Commission to all U.S. domestic producers, but which is now restricted to reserves established by November, 1958.

In these circumstances the Authority considers that the attention of prospective operators should be drawn to the need,

before becoming involved in any expenditure, to weigh what chances there are that a new uranium mine could be brought into production assuming a selling price, including amortisation, probably even lower than $8 per lb.

Things being as they are, this is obviously sound advice, but we deplore the necessity for discouraging new producers. We have never been among those who advocate purchasing policies which seek to expand production regardless of cost. On the other hand, mining is unlike most other industries in that it cannot readily be expanded or contracted in accordance with the fluctuations of demand. It normally takes some years to bring a mine to production, and for this reason mining can be said to be in a healthy position when surplus capacity is available to take care of future growth in demand. This statement is certainly true of the traditional metals and there is no apparent reason why it should not also hold good for uranium. The decision to proceed with the development of a new mine is essentially an act of faith in the long-term market outlook. This applies still more forcibly to exploration. Having regard to the present trend in the uranium market, it is hardly surprising that the A.E.A. should have found it expedient to issue its warning and also that it should have decided not to undertake any further prospecting commitments for uranium. Time alone can tell, however, whether from a long-term standpoint the adoption of a more cautious approach to the development of uranium supplies has, in fact, been wise.

So far as the question of prices is concerned, it is understandable — and, indeed, within certain limits commendable — that the A.E.A. should wish to obtain its raw materials as cheaply as possible, consonant with the reasonable requirements of its suppliers. Moreover, as the industry gets into its stride some easing in prices might normally be expected to occur. After amortisation and the redemption of the initial loans have been completed, effective production costs should, of course, be lower, perhaps to the extent of $2-$3 per lb., but any fall in price to a still lower level could involve the risk of closure. Having regard to the potential future needs, we cannot believe that either the U.K. Atomic Energy Authority or the U.S. Atomic Energy Commission would allow any major setback to the uranium industry as a result of excessive price reductions.

In the light of past experience in other fields, we ourselves believe that present estimates of long-term requirements are likely to prove over-conservative rather than unduly high, always assuming that no steep drop occurs in the level of military demand, which at present shows no apparent signs of diminishing.

Moreover, as our earlier article recalled, the Canadian and South African producers started up these new uranium industries at the express and urgent request of the U.S. Government (and also the U.K. Government), and they now account for 5 per cent and 14 per cent respectively of the export trade of Canada and South Africa (excluding gold). Other considerations apart, there appears to be a moral obligation towards these two developing countries which could scarcely be ignored.

UNGAVA-LABRADOR'S RECEDING FRONTIER

Fifteen years ago Ungava-Labrador was a remote and largely unknown region, states the current *Monthly Review* of the Bank of Nova Scotia. Today the frontier is being pushed back and the area is being drawn into the orbit of Canada's economy.

Necessarily, development is on a grand scale. Only the promise of a large volume of output could justify the costs involved in bringing into production resources located in such remote and inhospitable country. In the past ten years the development of the iron ore deposits at Knob Lake has led to the construction of a railway line from the shores of the St. Lawrence 360 miles north and the building of a new town, Schefferville, in the interior.

This first opening of the interior is now being followed by other large-scale developments, again based on iron ore. In the Mt. Reed area work is currently under way to bring the Lac Jeannine deposit into production. In the Wabush Lake area acitivity has been stepped up. Ungava-Labrador is rapidly becoming one of the major iron-producing areas of the world.

By the mid-1960's iron ore shipments from the projects now operating or reasonably certain to be developed could well exceed 30,000,000 tons, the Review points out. Hundreds of millions of dollars will have been spent in bringing the mines into production. The impact of this heavy construction programme, the building of more new towns, harbours, railways and power plants, can scarcely fail to stimulate still further development.

Another rich endowment of Ungava-Labrador is its enormous water-power resources, still largely untapped. One of the biggest remaining undeveloped power sites in Canada is at Grand Falls on the Hamilton River. Surveys have indicated that 4,000,000 h.p. could be developed there at a single site, while in almost any part of the interior new mining projects will find convenient locations for power plants. The extremely large power resources of the rivers flowing into the St. Lawrence have already begun to be developed.

The stimulus from the iron ore projects in the north and the development of ilmenite deposits at Allard Lake, with all the accompanying railway and airfield construction, has been reinforced by the establishment of an aluminium smelter at Baie Comeau with an initial capacity of 90,000 tons and by the hydro-electric development on the Bersimis River.

With the opening of the Seaway this year, the St. Lawrence River becomes an even more important transportation link for the North Shore and the mining projects in the interior. Indeed, the prospect of large-scale shipments of iron ore from Ungava-Labrador was one of the major considerations in the decision to build the Seaway.

EXPANSION OF CHILE'S COPPER OUTPUT

The Departamento del Cobre has estimated that Chile's copper production will increase from the present level of 485,000 l.tons a year by 40 per cent during the next three years, the Bank of London and S. America reports. It is calculated that Chile currently produces 15 per cent of world production and that by 1962, after allowing for known expansion plans in other countries, this proportion should rise to 17 per cent.

The new mine El Salvador should produce between 100,000 and 120,000 tons annually, while the Chuquicamata and El Teniente mines will each show an increase in production of about 15 per cent. Production from the small and medium mining group, at present about 45,000 tons annually, is expected to rise to 80,000 tons.

Brazil's Mineral Exports

BRAZILIAN exports of mineral origin dropped, in 1958, to 3,611,132 tonnes, valued at $U.S.78,225,827, from the 1957 record of 4,343,164 tons and $U.S.98,152,159. The drop was due to diminished sales of iron ore and manganese amounting to 662,066 tonnes and 103,866 tonnes, resulting from the retraction in world markets, particularly in the United States. During the last three years, American buyers have taken 56.80 per cent and 32.73 per cent respectively of Brazil's exports of these minerals.

In January, 1959, with a view to facilitating sales abroad at competitive prices despite cruzeiro depreciation and acute inflation, Brazil raised the export rate of exchange for iron and manganese ores from 70 to 100 cruzeiros per dollar, and authorized exporters to sell the bills for all other minerals on the free market, where the buying rate is now around 130 cruzeiros.

Engenharia, Mineracao e Metalurgia (Rio) publishes the following list of mineral exports in 1958, compiled from licences visé-ed by the Department of Mineral Production (D.N.P.M.):

Mineral	*Tonnes*	*Value in U.S. $*
Barytes	45,407	408,663
Bauxite	3,500	88,050
Beryl	1,548	582,612
Kaolin	229	5,932
Columbite-Tantalite	137	518,128
Rock crystals	705	389,983
Iron ore	2,858,911	39,546,392
Granite	1,075	39,620
Graphite	131	147,512
Magnesite	940	49,530
Manganese	695,042	32,758,810
Mica	820	937,662
Scheelite	1,862	2,527,226
Wolframite	425	?
Zirconite	2	360
Others	399	?

Iron Ore

Dr. Guilherme de Carvalho, Chief of the Mineral Classification and Trade Division, reports that Brazil's export capacity is now 5,000,000 tonnes annually, including 1,500,000 from the Paraopeba Valley and 3,500,000 from the ex-British Itabira mines, in Minas Gerais. In 1958, Cia. Vale do Rio Doce exported 2,212,156 l.tons, valued at $U.S.31,297,712, through the port of Victoria, while independent companies in the Paraopeba Valley shipped 646,754 tons at $U.S.8,248,680 via Rio de Janeiro. All mineral was haematite, either compact lump, 8 in. x ½ in., fine, less than ½ in., or run-of-mine, a mixture of lump and fine. Quotations for lump haematite, 68.5 per cent Fe, have remained relatively steady in the last three years at $U.S.14.00 to $14.60 per l.ton f.o.b. Victoria, but dropped to $U.S.11.50 to $12.00 for 1959 shipments.

As regards future prospects for Brazil's iron ore, Cia. Vale do Rio Doce is improving mining and transport installations with the object of raising export capacity to 6,000,000 tons. Cia. Mineracao do Brasil has formed a subsidiary, Nova Mineracao S.A., in which 49 per cent of the shares are held by the Jafet group and 51 per cent by Nelson Rockfeller's associates. The new company will finance reforms to the Central Brazil Railway to increase transport capacity to 7,000,000 tons, and the Federal Government will guarantee cruzeiro prices, based on international quotations.

Finally, the M. A. Hanna Company, of Cleveland, which now controls Cia. de Morro Velho (see *The Mining Journal*, February 28, 1958), announces its intention to transform St. John del Rey into one of the big suppliers of iron ore to Europe and the United States, commencing in 1961.

Manganese Ore

Exports in 1958 included 604,496 l.tons, valued at $U.S.29,353,257, by Industria e Comercio de Minerios (ICOMI) from the Amapa Territory; 53,468 tons at $U.S.2,353,257 by Cia. Meridional de Mineracao from the Queluz district of Minas Gerais; and 1,682 tons at $U.S.75,690 by the Chamma group from the Urucum deposits in Mato Grosso.

As production from Amapa and Mato Grosso increases, exports from Minas Gerais will cease, the Lafaiete reserves, now down to 7,500,000 tons, being reserved for steelworks in Rio, Sao Paulo, and Minas Gerais, the requirements of which will probably reach 90,000 tons in 1961. Cia. Meridional, a subsidiary of United States Steel and concessionaire of the Morro da Mina mine in Minas Gerais, will then assist in exploiting the Mato Grosso deposits. Exports from the Urucum mines, via the Paraguay River, should reach 150,000 tons annually when the land and river installations are completed, possibly this year.

Quotations for manganese dropped this year, and are not expected to recover until the American stocks, imported under contract and accumulated during the recession, are substantially reduced. In order to compete with Indian supplies, Brazil has fixed the export price for metallurgical type at $U.S.0.79 per metallic unit in the l.ton.

Brazil's known reserves of manganese ore are estimated at 75,000,000 to 120,000,000 tons, made up as follows: Mato Grosso, 45 to 50 per cent Mn, 40,000,000 to 65,000,000 tons; Amapa, 46 to 54 per cent Mn, 20,000,000 to 30,000,000 tons; Minas Gerais, 40 to 46 per cent Mn, 6,000,000 to 7,000,000, and below 40 per cent Mn, 6,000,000 to 9,000,000; Bahia, 38 to 50 per cent Mn, 2,000,000 to 5,000,000; Amazonas, Espirito Santo, etc., 1,000,000 to 4,000,000.

Other Minerals

Industrial Beryl: Exports have dropped progressively to 1,548 tonnes from 2,309 tonnes in 1956; quotations remained relatively steady until last year, when they weakened owing to increased competition from African beryl. The Brazilian Commercial Office in New York reports that importers are holding off in anticipation that Brazil's minimum price of $U.S.34.00 per s.ton will be reduced to $28.00.

Scheelite (Brazil's third most important mineral export): Although the minimum price of $U.S.17.00 per unit of

WO3 in the short ton exceeds the international quotation, exports have increased from 1,439 tonnes in 1956 to 1,862 tonnes in 1958. Wah Chang do Brasil, subsidiary of the American Wah Chang Trading Co., who leased and began exploiting deposits in 1956 at Currais Novas, Rio Grande do Norte, monopolized buying and exporting in 1958. Local consumption was negligible until 1955, but is now growing.

Rock Crystals: Exports dropped from 1,387 tonnes in 1957 to 705 tonnes last year, when the American stockpiling contracts expired. The situation is likely to deteriorate further owing to the threat of synthetic production in the United States. Unless Brazil finds other markets several mines may have to close down.

Columbite and Tantalite: Exports increased last year to 137 tonnes from 130 tonnes in 1957. D.N.P.M. fixed minimum prices in 1958 based on percentages of Ta_2O_5 and Nb_2O_5. Example: 70 to 60 per cent Ta_2O_5, maximum 20 per cent Nb_2O_5: basis 50 per cent Ta_2O_5 plus Nb_2O_5 minimum price $U.S.3.00/lb. of pentoxides; premium $U.S.0.03 for combined tenor above 50 per cent, plus supplementary premium $U.S.0.04 per tenor of Ta_2O_5 above 50 per cent.

Abundant reserves of columbite and tantalite await exploitation in north-east Brazil, Bahia, Espirito Santo, and Minas Gerais. Exploitation of the recently discovered occurrences of columbium and thorium at Barreira de Araxa, with inferred reserves exceeding 370,000,000 tonnes, will probably start in 1960.

Barytes: Exports increased abruptly from 280 tonnes in 1956 to 45,407 tonnes last year, when production exceeded 50,000 tonnes. Owing to Brazil's small domestic market for the majority of minerals, mining activity varies with the demand from abroad. Companies are generally small and ill-equipped. The best-known deposits are those of Rio Branco do Sul (Parana), Santa Luzia (Paraiba), Ouro Preto, and Araxa (Minas Gerais), and Camamu (Bahia). Activity was concentrated at Camamu last year, but a "mixed economy" society has been organised to exploit apatite deposits at Araxa with reserves containing 7 per cent of barytes.

Bauxite: Exports dropped from 21,000 tonnes in 1956 to 3,500 tonnes in 1958, but the output of the mines was maintained at around 63,000 tonnes, due to the growing domestic demand. Local production of aluminium increased to 9,500 tons last year, and should reach 21,500 tons in 1960. Mining activity is most intense in the Pocos de Caldas district, where twenty-one registered mines were operating in 1958. A valuable deposit is now being investigated at Retiro Branco, Minas Gerais, others are being prospected in Amazonia and Itatiaia, and three new mines were registered in Sao Paulo last year.

Prospecting and Mining

Exploitation of the pyrochlore deposits, discovered in 1953 at Barreira de Araxa, Minas Gerais, is planned to start towards the end of 1960 by an association of Brazilian and United States firms. The Department of Mineral Production, assisted by representatives of the National Research Council, is continuing its investigations. The following results have been obtained from recent analyses: 185,733,000 tonnes of ore, averaging 2.5 per cent of Nb_2O_5; or 9,286,650 tons of pyrochlore with over 56 per cent of Nb_2O_5; approximately 130,000 tons of ThO_2; and 84,500 tons of U_3O_8. In addition, the pyrochlore contains about 9 per cent of rare earths.

Brazil's growing interest in mining activities is stressed by the issue on one day, May 18, of twenty-nine licences to prospect deposits of minerals, including ilmenite, iron, mica, bauxite, cassiterite, and quartz, also five permits to exploit deposits. According to the Code of Mines, before a licence to exploit is issued, prospectors must satisfy the Department of Mineral Production that the deposit is of commercial value. Approximately one-third of the licences to prospect are eventually converted into mining licences.

To encourage the search for new deposits, the Brazilian Income Tax Law of November 28, 1958, rules that the expense incurred in prospecting for minerals may be deducted from the tax, provided prospecting was authorized by Federal decree and the expenditure is certified by the Department of Mineral Production.

TURKEY—III.

Turkey's Coal and Iron Resources

THIS is the last of three articles based on "The Mineral Industry of Turkey" by L. Nahai (Bureau of Mines, U.S. Department of the Interior, Information Circular 7855).

Turkey's energy requirements are met from coal and lignite, petroleum, hydroelectric power, fuel wood, and animal waste. Of these energy forms, only petroleum must be imported; domestic resources of other fuels are adequate for present and anticipated energy consumption. Present petroleum production is confined to a small area in south-east Turkey, with limited and local significance—a situation that may well change as a result of current exploratory activities.

The estimated consumption of commercial sources of energy (excluding fuel wood and animal waste) in terms of coal equivalent increased 3½ times between 1937 and 1956, rising from 1,572,000 to 5,695,000 tonnes. In 1956 the contribution of coal and lignite to the total may have exceeded two-thirds.

Coal is the most important mineral commodity and fuel resource of Turkey. Reserves, although not large by world standards, may be considered large enough for the country's present modest requirements. Conservation of this limited resource and an attempt at complete extraction of the beds have led to the adoption of expensive mining methods.

In contrast to lignite deposits, which are fairly well scattered, concentration of the entire bituminous-coal reserves at Zonguldak makes distribution costly and, for eastern Turkey, economically prohibitive.

The Eregli-Zonguldak field was discovered in 1829, but mining did not begin until about 1848. Production of run-of-mine and marketable coal has risen from an average of about 600,000 tonnes annually in the period 1902-1921 to 5,888,300 tonnes in 1956. In the first half of 1957 it totalled 3,105,636 tonnes.

Maintaining production during World War II, when procurement of machinery and spare parts became extremely

difficult, was the result of ingenuity and abnormal effort by the mine operators. However, by 1947 conditions at the mines required a major degree of rehabilitation if a serious decline in output was to be prevented. This rehabilitation demanded, to a large extent, complete replacement rather than repair of existing installations.

With E.C.A. aid, development and equipment of the Zonguldak mines have been under way since 1948. It is expected that completion of this programme will enable the annual production of marketable coal to reach 5,800,000 tonnes, and that production costs will be reduced by £T3 per tonne. This target figure represents perhaps the optimum production that may be expected from the Eregli field. The programme is expected to cost perhaps the equivalent of $144,000,000 before it is entirely completed.

The Government bought the concessions of the pioneer producers, in the Eregli-Zonguldak field, the Société Francaise d'Héraclée, in 1936 and those of other private operators in this area in 1940 and placed them all under the financial direction of the Eti Bank.

The coal basin borders the Black Sea roughly for 50 kms. and extends, without interruption, from Camli to Catalagazi. Width is variable, with a 3 km. minimum. The 52 seams belong to the Lower, Middle and Upper Carboniferous, which underlie folded and faulted Cretaceous rocks. In the entire Zonguldak field about 42 per cent of total production is derived from seams within the limit of 80 cms. to 1.5 m. Total thickness divided by the number of seams varies from 1.4 to 2.2 m. Thickness of individual seams is extremely variable, from 0.45 to 8 m., and the pitch is steep, though in the bottom of the synclines the seams become almost horizontal.

The seams occur in synclines and frequently are cut by faults. This factor, with the steep dip and variable thickness of the coal, makes difficult the application of machinery to the mining of deposits.

Evaluation of the reserves is hampered by the complex geology and stratigraphy of the region and faulting of the formations. In the light of current information, total reserves are given as 1,076,000,000 tonnes, of which 363,000,000 tonnes are placed in the " measured " category, 460,000,000 being classed as " inferred ", and the balance as " indicated ".

In 1956, 5,453,220 tonnes of coal were washed, yielding 3,717,000 tonnes of prepared coal. Most of the former washeries have been replaced by two new washeries at Catalagzi and Zonguldak. The former washery has two parallel circuits of 250 t.p.h. each and a flotation section of 80 t.p.h. capacity. Zonguldak has a capacity of 750 t.p.h. in three parallel circuits. A new washery of 200 t.p.h. is to be erected alongside a colliery under development at Armutcuk.

For many years the Zonguldak mines have been short of power. A new coal-fired power plant with 3 units of 20,000 kW. each was completed in November 1948 at Catalagzi. The capacity of this plant is now being doubled. Power from Catalagzi will be more than enough to take care of the requirements under electromechanisation.

Production of lignite has increased steadily since the war, the 1956 output of 3,010,000 tonnes being nearly seven times the 1941 figure. Of the 1956 production, 2,070,937 tonnes came from the Soma, Tuncbilek and Degirmisaz mines, operated by a subsidiary of the Eti Bank. There is also a limited production by private operators. Geological conditions in the State-owned mines favour low-cost production and the mines have easy access to road and rail transportation. The lignite is of good quality and has a high calorific value. As in the case of Zonguldak, E.C.A.-F.O.A. funds (amounting to nearly $7,500,000 direct aid) have been important in developing these mines.

Iron Ore

Production of iron ore increased from 112,000 tonnes in 1946 to 953,806 tonnes in 1956. Until 1952 the entire tonnage was obtained from the Divrigi mine and was shipped by rail to the Karabuk steel plant, 1,000 kms. away. Since 1952 ore has been produced for export from several mines in the Edremit and other areas.

The Edremit mines are favourably situated for export, but the ore carries arsenic. It is believed that only during periods of high world steel production could Turkish iron ore command a market in Europe. A new company formed by Krupp with several Turkish banks will investigate the Edremit deposits further as part of an overall examination of iron ore deposits with a view to establishment of a second steel plant.

Evaluation of Turkey's iron ore reserves is difficult, because few deposits other than Divrigi have been systematically sampled and analysed. Available estimates indicate a total of 150,000,000-200,000,000 tonnes of iron-bearing material, but these figures should be regarded as indicative of the possible magnitude of known deposits, rather than reserve tonnages calculated in the usual engineering manner. A large percentage of the tonnage cannot be considered as ore in the economic sense. The direct-shipping ore may not amount to more than 75,000,000-100,000,000 tonnes, of which the Divrigi mine accounts for 39,500,000 and the Buyuk Eymir mine in Edremit County for 11,500,000.

By far the largest of the three ore bodies at Divrigi is that of Demirdag, with reserves of 35,000,000 tonnes of magnetite. The ore near the surface is good furnace ore, but pyrite at depth increases the sulphur content to 0.35 per cent. A sintering plant has been installed at Karabuk to treat the high-sulphur ore, which is Divrigi's main reserve. Average analysis of the ore is : Fe 66.5 per cent, S. 1.6 per cent, CaO 2.5 per cent, Si O_2 2.5 per cent., P.O. 7 per cent, MnO 0.6 per cent, MgO 0.5 per cent, Al_2O_3 0.7 per cent.

Mining at Demirdag is by open pit ; there are 17 levels in all. To increase production to an annual rate of 400,000 tonnes, E.C.A.-M.S.A. allocated about $2,500,000 for mine development and purchase of equipment. A second programme had as its final objective an annual output of 1,000,000 tonnes a year, to be achieved in December, 1958. In 1952 the cost of production of ore was estimated at £T9.46 ($3.37) per tonne at the mine.

Steel Industry

The known ore reserves of Turkey, though modest by world standards, are adequate to satisfy, for many decades, the needs of the Turkish steel industry at the present scale of consumption or with a moderately expanded one. The reserve situation becomes more favourable when smelting methods, such as the Krupp-Renn, are considered, because much of the known iron ore in Turkey is too high in silica to be suitable for use in blast furnaces.

Almost the entire iron and steel output of Turkey comes from the Karabuk plant, owned by the Turkish Iron and Steel Industry Association. Karabuk is an integrated steel plant employing nearly 5,000 people. The plant, which has been in operation since 1939, was designed by Brassert and constructed by British firms.

The expansion programme at Karabuk has the final objective of 600,000 tonnes of ingot steel and 675,000 tonnes of pig iron annually. The entire programme will cost £T346,000,000 or $123,570,000, of which approximately $59,000,000 will be in foreign exchange. Repayment will be mostly in future production of iron ore, chrome ore, pig iron and blister copper.

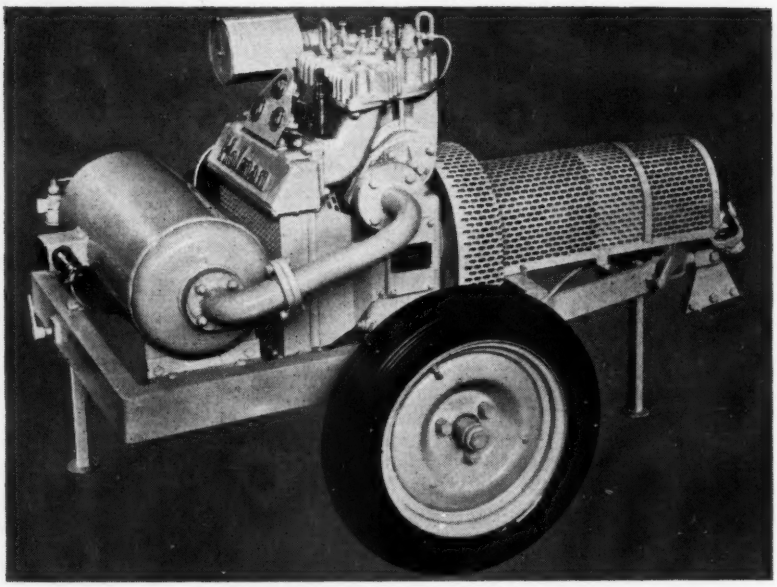
Machinery and Equipment

A New Contactor Starter

The K3.3 kV contactor starter manufactured by The Belmos Co. Ltd. is designed for the direct-on-line starting of 3.3 kV motors up to 600 h.p. It is housed, complete with control and protective equipment, in a pillar which may be free-standing or grouped with similar units to form a switchboard. The pillar comprises two main compartments containing, on the left, the contactor and, on the right, the current transformers, fuse-links, and control circuit transformer. Above the main compartments are the instrument and isolator chambers.

The main busbars, fitted when the pillar is in switchboard form, have a continuous rating of 1,000 amperes and can withstand a through fault of 150 MVA for 3 seconds. These busbars and the medium-voltage a.c. and d.c. buswires and sequence wires, which are fitted when required, run in separate horizontal ducts behind the instrument and isolator chambers.

The contactor and magnet assembly is mounted on a chassis which can be withdrawn from the enclosure for inspection or maintenance, with the main connections between the chassis and enclosure made by means of blade and clip contacts at the rear.



The Holman ATH8 and TA13 air compressors are now available in easily portable form, mounted on a two-wheel with independent suspension

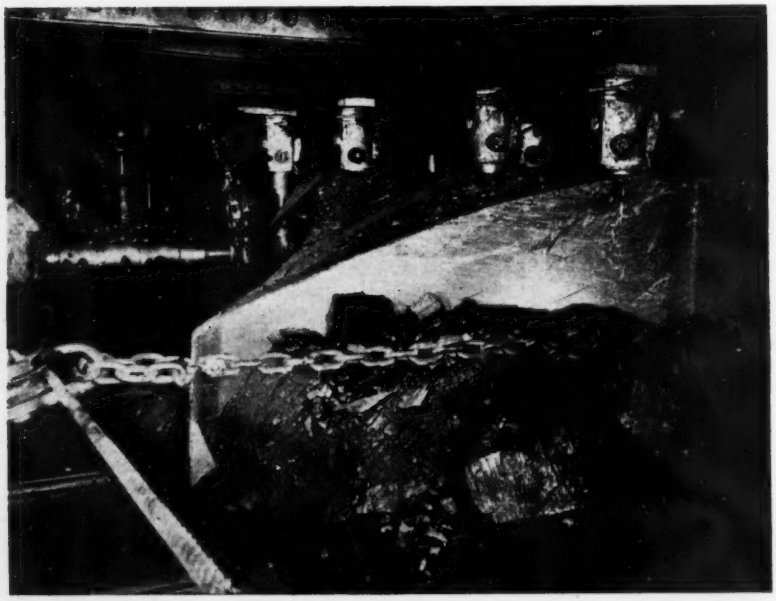
NOMADS UP-TO-DATE

Iraq Petroleum Ltd. and its associated companies are looking for oil in Iraq and Eastern and South-eastern Arabia, and have equipped some of their drilling rig camps with wheeled caravans comprising complete laboratories, stores, medical units, workshops, kitchens, mess rooms, living accommodation, and food, water and fuel.

Sparshatts (Metal Bodies) Ltd. built 12 special caravan bodies on trailers manufactured by Cranes (Dereham) Ltd. These are (1) staff mess and lounge, (2 and 3) two kitchens, (4 and 5) two further messes, (6) petroleum engineers' laboratory, (7) geological laboratory, (8) dry ration store, (9) medical room, (10) cold store, (11) drilling workshop, and (12) a communication caravan.

To alleviate the rigorous climatic conditions the caravans, with the exception of the extendible type, have 3 inches of insulation between the panelling. The extendible caravan, because of the need to have the sides and roof as thin as possible for folding, has only 2 inches of insulation. However, this caravan, as well as the two laboratories and the medical room, has air-conditioning units, and all other caravans are provided with electric fans.

The lump shearer machine



LUMP SHEARER MACHINE

Two machines involving the modification of the Anderton Shearer-Loader to improve the proportion of large coal produced have proved successful in the Silkstone seam at Pye Hill Colliery, where a make of saleable coal above two inches in size of 33 per cent has been consistently achieved.

The modification consists of the replacement of the basic shearer drum by a disc, rotating in a vertical plane, of such diameter as will suit the particular seam section in which it is to operate. The disc is fitted with boxes holding cutting picks, and is secured to the end of a shaft the length of which is predetermined according to the depth of web to be extracted. The whole periphery of the extended shaft is designed to house cutter picks to clear a path for itself.

The lump shearer works in conjunction with a cutting machine which undercuts the coal to the depth of web to be extracted. This machine, which is fitted with a swan-necked jib, runs on an armoured conveyor ahead of the shearer. The plough on the shearer has been redesigned in such a way that it will plough in both directions, and will lift and turn over the full depth of web being cut. The machine speeds have been considerably increased, but the hydraulic haulage system is the same as used on a standard hydraulic shearer.

MINING MISCELLANY

The Werra Potash Combine, an East German State concern operating in the Erfurt district, announces that it has applied the flotation process to the mining of rock salt. It claims that this is the first time this has been attempted. To date, some 400-500 tonnes of rock salt have been produced by this method at the Werra plant. One miner, it is stated, can now produce twenty times as much salt as previously.

*

Preparations are on hand at the Altenberg, near Dresden, plant of the East German State-owned tin mining company, VEB Zinnerz, to take up the production of lithium, which is needed by the East German chemical programme.

*

An option on a large deposit of graphite ore discovered two miles east of Portland, Ontario, has been sold to Joseph Dixon Crucible Co. of Jersey City, N.J. The find has been described as perhaps the largest graphite deposit ever discovered in North America.

*

Iron Ore of Canada is to spend $75,000,000 next year on building an ore processing plant in the Carol Lake area of Labrador. This plant, which will be one of the largest plants of its kind in the world, will be able to process up to 6,000,000 tons of ore concentrates annually.

*

Southeast Ireland Syndicate has signed a contract with Hunting Airborne Geophysics to conduct an aerial electromagnetic survey over its concession holdings in Ireland. The programme will entail 2,000 line miles and will extend over the area 60 miles south of Irish Copper holdings to a point 20 miles inland from the east coast. The survey will cover the sector down to the boundary of the former producing Bonmahon copper mines and is regarded by the Syndicate Manager, Mr. H. D. Forman, as one of the most favourable geological areas in Ireland. On completion of the survey ground parties will be used for systematic checks of any favourable indications resulting from the airborne programme. Participants in this new mineral search include the H. W. Knight Jr. interests, Chesterville Mines, Jacobus Mines, Silver Miller Mines, Yale Lead and Zinc Mines, Agnico Mines, and McWatters Gold Mines Ltd.

*

Over 600 geological parties are now prospecting for minerals in Kazakhstan, according to a recent statement by Mr. Alexander Bogatyrev, Minister for Geology and the Conservation of Mineral Resources of Kazakhstan. During the present seven-year period this republic will develop more rapidly in the industrial field than any other part of the Soviet Union and output is to be increased by about 170 per cent.

*

An open-air mineral garden is to be the central feature of the new office headquarters building now nearing completion for the American Society for Metals 23 miles east of Cleveland. The garden, which will be 100 ft. in diameter, saucer shaped and attractively planted, will contain over 350 ore specimens.

*

The first shipment of 500 tons of copper from Anaconda's new El Salvador mine in Chile arrived recently at the Raritan Copper Works in Perth Amboy, New Jersey. The metal, which is blister, will be electrolytically refined.

*

The Noranda subsidiary, Gaspe Copper Mines, will cut copper production by more than 10 per cent late this year. This curtailment will come about as a result of lowering the grade of ore mined to the average in the reserves. Gaspe's three-year period of exemption from Canadian Federal income tax expired on April 30.

*

The first Colombian zinc plant will be opened in early August in Bogota by Metales y Productos Afines, which operates with a capital of 2,000,000 pesos. The plant will produce 2,500 tons of zinc a year and, with sub-products such as zinc oxide and others, will save $1,000,000 in imports. Production capacity will eventually be expanded. The plant will use ore from mines at Junin some 30 miles east of Bogota.

*

The Transvaal's old mine dumps probably contain enormous quantities of uranium, states Dr. H. F. Frommurze, assistant director of geological survey. This wealth of uranium in the old dumps might well prove valuable to the Union of South Africa one day, possibly in a time of need. Dr. Frommurze is retiring at the end of September after 38 years' Government service as a geologist.

Some 550 tonnes of "Ammonite" type explosive are expected to be used to break a 2,000,000 tonne block of non-ferrous ore in a single blast at an underground mine in Eastern Kazakhstan, according to a recent report by *Tass*. The block is about 200 ft. high and has a base nearly 400 ft. square below the surface in the Altai Mountains. According to the report, some 500,000 tonnes were broken in a recent test at another location, using about 190 tonnes of explosive placed in 23,000 ft. of drillholes. The success of this blast led to the planning of the larger operation now contemplated.

*

On July 29 Mr. A. R. Neelands, chairman of the Cementation Co. Ltd., began his annual tour of the company's interests in North America by air, rail and sea. The trip will take approximately seven weeks. The Cementation Group is represented in Canada and the U.S. by 15 subsidiary companies.

*

The establishment of a fellowship to honour the visit of H.M. the Queen and H.R.H. Prince Philip to the nickel mines in the Sudbury area has been announced by International Nickel and the Canada Council. It will be known as 'The Queen Elizabeth II Fellowship (The International Nickel Company of Canada, Ltd., Royal Tour, 1959)'. The award will be a post-doctoral fellowship tenable for two years.

QUARRY BLENDERS INSTALLED

Hilton Gravel Ltd., one of the largest quarry proprietors and suppliers of sand and gravel in the North and East Midlands, have now installed a system of volumetric feeders at their Mercaston (Derbyshire) pit which is turning out between 800 and 1,000 tons of sand and gravel every day.

The system consists of Parker "Blenders" made by Frederick Parker Ltd. One of these is fitted to each of four of the storage bins which form part of the crushing, washing and screening plant.

Metals and Minerals

U.S. Aluminium Strike is Deferred

The prospect of a major strike in the U.S. aluminium industry, which appeared to be imminent following the rejection by the three leading producers of wage demands made by members of the United Steelworkers' Union, has been averted for at any rate a short period. So far the union's efforts to obtain pay increases for its 30,500 members employed by Alcoa, Reynolds and Kaiser have proved no more successful than its negotiations with the major steel companies. In rejecting the wage claims, the three aluminium companies urged the union to accept a one-year wage freeze. This was in line with the steel industry's original proposals to the union, which were rejected early in the negotiations. Alcoa has also rejected demands for wage increases from the Aluminium Workers International Union and the United Auto Workers, thus completing what appears to be a total deadlock in aluminium negotiations.

Just as a strike seemed virtually certain, the United Steelworkers' Union agreed to extend contracts with the major aluminium producers until after settlement had been reached in the steel dispute. This surprise move is not without precedent, for in 1956 the A.W.I.U. extended its contracts with Alcoa and Reynolds for a few days beyond the expiration date while working out new arrangements, although the Steelworkers struck. The implication, presumably, is that aluminium producers are expected to come into line with the terms arrived at with the steel companies, as has happened in previous years.

Meanwhile the U.S. aluminium industry continues to forge ahead, production reaching to record total of 167,323 net tons in June compared with 163,857 tons in May and with 115,325 tons in June last year.

Of particular interest among recent developments is the announcement that all-aluminium railway hopper trucks, which entered service for the first time two years ago carrying bauxite for Aluminium Ltd., have been conditionally approved by the Association of American Railroads for immediate interchange service on railways in the U.S., Canada and Mexico. It is further reported that Reynolds is to supply 9,350 s.tons of aluminium plate and extrusions for the production of 1,205 aluminium goods wagons for the southern railway system. This represents the first large volume application of aluminium by the U.S. railway industry.

*

In our issue of July 3, 1959, we reported the pending formation of Imperial Aluminium Co. as a holding company linking Imperial Chemical Industries with Alcoa in the manufacture of wrought aluminium products. This company has now been formed. The authorised capital is £2,695,000, I.C.I.'s interest being 51 per cent and Alcoa 49 per cent. As previously announced, the company will take over I.C.I.'s aluminium plant in South Wales at a valuation which is expected to be in the region of £10,000,000. The immediate aim is to obtain the maximum production from this plant and to increase I.C.I.'s share of the domestic market.

*

With its small integrated aluminium industry expanding rapidly, Mainland China gives every indication of becoming a medium producer by world standards. Even in 1959 its output is expected to exceed that of the U.K. states the *Engineering and Mining Journal*.

Last year China probably produced about 27,000 tonnes of primary ingot. As of early 1959, however, the annual capacity for aluminium extraction is estimated at 60,000 tonnes and there is adequate alumina capacity to meet reduction needs. The target for 1962 has been variously reported at between 100,000 and 120,000 tonnes, while aluminium output might well rise to 180,000 tonnes or more by 1965.

CANADA'S URANIUM INDUSTRY

A complete study of Canada's uranium industry, including a forecast of the future, has been launched by the Federal Government, and has been accorded a high priority. In announcing this step in the Commons, the Trade Minister, Mr. Churchill, promised that the Canadian Government would take whatever steps it could to ease conditions and contribute to a stable industry.

Anxiety regarding the future of Canada's uranium industry has been increased by recent reports from Washington indicating that there is little chance of the U.S. Atomic Energy Commission renewing contracts with Canadian producers after 1962.

In reply to a question, Mr. Churchill said he felt that there was much to be gained by negotiations with the U.S., but that the best hope for a stable industry lay in proved success for the 200,000 kW CANDU power reactor recently ordered. This plant, which could be in operation late in 1964 or early in 1965, will use a natural uranium heavy water system. A main consideration behind the decision to develop nuclear power in Canada is to assist in developing markets for Canadian uranium, if and when military requirements end. Initially the plant will require some 75 tons of uranium metal, representing a cost of about $4,500,000.

U.K. QUICKSILVER MARKET

Although quicksilver dealers continue to quote £75 per flask ex-warehouse, London, the market remains delicately poised. Demand has been very quiet for some time and this condition is probably being aggravated by the start of the holiday season. In the circumstances there is an occasional tendency to shade prices. The belief has been expressed in some quarters that Italian metal is sometimes being sold at slightly below the quoted level. In the first five months of this year Italy exported 301 tonnes of quicksilver compared with 152.5 tonnes in the corresponding period of last year.

It remains to be seen whether the recent devaluation of the peseta will enable Spanish quicksilver to become more competitive abroad.

AUSTRALIA'S BAUXITE RESERVES

A symposium on aluminium, held last week in Brisbane, was told that Australia possessed a third of the world's known bauxite resources. This information was given in a report on bauxite deposits throughout the world by senior officials of the British Aluminium Co. and the Commonwealth Aluminium Corporation. Mr. H. Evans, the Corporation's chief geologist, estimated that the bauxite deposits at Weipa in North Queensland could eventually yield more than 1,000,000,000 tons of ore and would help Australia to assume an important role in the world's aluminium industry. In addition to the Weipa deposits, he stated, there were large deposits in the Northern Territory, northern New South Wales, Victoria and Tasmania.

LONDON METAL AND ORE PRICES

The following prices, as quoted on July 30, 1959, have changed during the past week :

Gold 249s. 10½d., silver 78⅝d. spot, 78½d. forward, tellurium 18s. lb., rutile 95/97 per cent TiO_2 (prompt delivery) £29-£30 per ton c.i.f. Australia.

COPPER · TIN · LEAD · ZINC

The markets have maintained a very steady undertone during the past week and there has been a slight upward movement in the prices of copper and zinc.

The dominant factor in the copper market is the course of negotiations in the United States between the Mine Mill Union and the copper producers. The latest news is that the Union is to meet on August 3 and that already some delegates are committed to vote for strike action if no agreement has been reached by then. As the threatened strike in the aluminium industry has been postponed by the extension of the contract for a short period, some observers feel that the same steps may be taken in the copper industry so that no action need be taken until the result of the present struggle in the steel trade is known.

The figures of stocks of mills and foundries in the United States show that during June there was an increase of some 17,415 s.tons giving total stocks at a record high level and this increase must be considered in relation to the producers' stock figure reported in the issue dated July 17.

There is a little more optimism felt about the price of lead, and zinc continues to be firm. The small labour troubles which have occurred recently have all been of a very short duration.

The tin market is still tending upwards and on Thursday the Eastern price was equivalent to £811⅞ per ton c.i.f. Europe.

Closing prices up to midday, July 30, are as follows :

	July 23		July 30	
	Buyers	*Sellers*	*Buyers*	*Sellers*
COPPER				
Cash	£224	£224½	£224½	£225
Three months	£225½	£225⅝	£224½	£224⅝
Settlement	£224½		£225	
Week's turnover	11,725 tons		11,125 tons	
LEAD				
Current ½ month	£71½	£71⅝	£69⅞	£70
Three months	£71⅝	£71¾	£70¼	£71
Week's turnover	11,000 tons		6,700 tons	
TIN				
Cash	£792½	£793	£792½	£793
Three months	£790	£790½	£789	£790
Settlement	£793		£793	
Week's turnover	890 tons		875 tons	
ZINC				
Current ½ month	£80½	£80½	£82	£82½
Three months	£79½	£79¾	£81	£81¼
Week's turnover	4,975 tons		6,250 tons	

Mining Finance

"Johnnies" Tax Position Explained

The preliminary profit announcement by Johannesburg Consolidated, the mining finance house, for the year to June 30 caused some uncertainty in the share market owing to the rather complicated tax position. The drop in the gross profit from £2,340,434 to £2,040,916 was regarded as being rather less than might have been expected in the light of the reduced dividends from the company's copper interests during this particular year, and the absence of any payment at all from Rustenburg Platinum. But the virtual halving of the net profit after tax at £990,266 against £1,940,313 came as something of a shock.

For the explanation we have to go back to 1954-55 when a change was made in the basis of valuing investments for tax purposes in a year when heavy depreciation had occurred owing to the fall in value of the large holding in Freddies Consolidated. As a result "Johnnies" tax liability was reduced to almost nothing in that period and has been below average ever since owing to further investment depreciation. Thus in 1957-58 when the U.K. tax charge was £375,000 relief in this respect amounted to as much as £681,000.

In the past year, however, the tide has turned and the company has had an appreciation in its holdings of £452,370. It also secured a profit of £230,250 from certain changes made in its investments. There is a tax liability on these items of about £370,000 instead of the preceding year's relief. This is why "Johnnies" 1958-59 total tax charge is up from £400,121 to £1,050,650 and the net surplus down to the extent already mentioned.

The appreciation in investments, of course, provides the corresponding advantage that the transfer to investment reserve has been cut from £1,737,777 to only £247,630 so that the maintained dividend of 4s. 6d. per £1 share, requiring £808,500, still allows a small increase in the carry-forward to £243,222. Investment reserve, after crediting the investment appreciation of £452,370 already mentioned, now stands at close on £2,000,000 and the book value of investments as at June 30 had risen during the year by £1,924,252 to £14,588,975. Market value, however, at that date was as much as £6,251,062 higher than a year ago at £25,162,027.

"Johnnies" issued capital is £5,866,666 in £1 shares. It was last increased in March, 1958, when 250,000 15s. stock units in the British South Africa Co. (Chartered) were acquired. At the present price of 63s. 3d. cum dividend "Johnnies" offer a yield of 7.4 per cent which looks reasonably attractive. In 1959-60 the company should get higher revenue from its copper investments, including Chartered, as another note in this column indicates, while the platinum companies should return to the dividend list even if only modestly. Diamonds should yield much the same and there should not be a great deal of alteration in the revenue from gold in which "Johnnies" probably now has a relatively minor stake.

There is also the possible speculative attractions to be considered of the Western Areas Prospect venture in which the Co. has the major stake and with which it is now to go ahead. This area, to the south of Randfontein and to the east of Libanon and Venterspost, has been well drilled and a large tonnage medium-grade gold mine is indicated. A Government lease has already been applied for and preliminary shaft-sinking work started.

LONDON MARKET HIGHLIGHTS

These days the South African Gold share market can be relied upon to produce a sudden boomlet for no very apparent reason and at a time when such a move seems most unlikely.

So it was this week. The market opened on Monday with a distinctly subdued air. This was partly a reflection of the usual dampening of business that coincides with the peak holiday season. It was also attributable to the annual report of the Atomic Energy Authority which was issued in the previous week and which repeated the well-known fact that there was already an over-supply of uranium in the world.

It was unreasonable that the uranium statement should depress Kaffirs, because for one thing the situation was already widely appreciated. Furthermore, South African uranium producers may prove to be better placed than most. At present they are protected by their 10-year contracts running into the mid-1960s, whereas the Canadian mines will have no such security after about 1961-62. And in the free-for-all uranium market that is expected to develop after contracts expire, it is already clear that Kaffir producers will at least have greater room for manoeuvre, even if costs cannot yet be accurately gauged by the market.

This sort of reasoning began to make some impression on Tuesday, but it was not until Wednesday that any improvement became noticeable. West Driefontein led the recovery, spurting 6s. 3d. to 143s. 9d. on Cape rumours of high borehole values being found in the hitherto unproved eastern part of the property. O.F.S. issues quickly moved up in a market none too well supplied with stock. St. Helena, which had been barely 80s. on Monday, soon rose to 82s. 6d. and Free State Geduld came to life with a rise of 1s. 10½d. to 191s. 3d.

In the Finance group, Gold Fields improved to 77s. 6d. and this consequently lifted New Union to 11s. in view of the one-for-seven offer terms. Johnnies remained rather neglected at 62s. 9d., there having been some disappointment with the preliminary profit figures. Among Diamonds, De Beers jumped to 169s. 4½d. following a steady Cape demand which was believed to have been partly on behalf of U.S. buyers.

Copper shares fluctuated rather narrowly with sentiment again being affected by the uncertainties regarding the near-term outlook for the metal. Chartered (93s. 9d.), however, already attracting support on yield considerations, improved further following the June quarterly report with its news of higher royalty income despite a slightly easier copper price. Rhokana (30½) were unaffected by the decision to close down the company's uranium plant; it was pointed out that this would make very little difference to Rhokana's earning capabilities.

Lead-zinc issues were helped to some extent by a forecast of an improvement in the outlook for zinc and a recovery in the price of this metal. Although lead still remained in the doldrums, Rhodesia Broken Hill hardened to 9s. 1½d. and Consolidated Zinc put on 1s. 6d. to 64s. 3d.

TINTO GROUP'S URANIUM RESULTS

Latest earnings reports of the Canadian and Australian uranium producers in the Rio Tinto group make a mixed showing as the accompanying table indicates. Rix-Athabasca, for instance, made a loss of $114,000 in the first half of the current year against a profit of $300,000 for the whole of 1958. Increased mine operating costs are the reason. These have resulted from a reduction in monthly tonnage and relatively high expenditure on development and exploration work.

Northspan, the largest producer, is still struggling, but at least cut down its loss to $590,000 last quarter from $1,441,000 in the first three months of 1959, a result mainly of an improvement in the grade of ore milled. The company has further reduced its funded debt during the past six months by $5,637,000, but it still stands at the huge figure of $87,555,000 and it is obvious that Northspan is going to have a long struggle to reach a position when there can be any thought of a dividend. The company's present contract with the Canadian Government purchasing agency, Eldorado Mining and Refining, runs until March 31, 1963.

Pronto, Rix-Athabasca and Mary Kathleen are at the dividend paying stage and they are expected to be joined by Algom some time this year.

	Net Profit 6 *mths to June* 30, 1959 $000's	6 *mths to June* 30, 1958 $000's	*Debts June* 30, 1959 $000's
Algom	6,565	5,543	—
Preston East ..	39*	128	—
Pronto ..	1,617	1,513	1,643
Rix-Athabasca	114†	183	—
Mary Kathleen	715(*a*)	—	8,342(*a*)
	3 *mths to June* 30, 1959	3 *mths to Mar.* 31, 1959	*Debts June* 30, 1959
Milliken ..	254	62	23,843
Northspan ..	590†	1,441†	87,555

*Before £50,000 loss on disposal of an investment. †Loss. (*a*) Australian pounds.

Rio Tinto holds varying interests in the Canadian uranium concerns through a 55 per cent stake in Rio Tinto of Canada and 51 per cent in Mary Kathleen in Australia through a wholly-owned subsidiary, Rio Tinto of Australia.

CHARTERED'S RISING INCOME

In the year to Sept. 30 last mining royalties of the British South Africa Co., after allowing for the 20 per cent payable to the Northern Rhodesian Government, amounted to £6,120,829 out of a total revenue of £9,126,561. It is against this background that the second of the newly-established quarterly reports from the company must be judged. The June quarter report, as did its predecessor, understandably only covers the royalty income. This was £2,729,000 against £2,500,000 in the preceding three months and £1,533,000 in the June quarter of 1958. It brings the total for the first nine months of the current financial year to next September up to £6,718,000 compared with £4,696,000 for the same period of 1957-58. (*Continued overleaf*)

In other words, there is already a major increase in Chartered's income from this source alone of fully £2,000,000. And there is virtually no risk of this being reduced to any extent in the final quarter despite the so-called cutbacks in production that have been announced by the Northern Rhodesian copper producers. The average copper price in the current three months is almost certain to be higher than that of the September quarter of 1958 when the London cash quotation started off at £196 a ton, rising to £212 by the close of the period. In July of the present year the price was forced down at one time to £210, but has quickly recovered to £228. On the output side there is certainly no reason to think that the Rhodesian Selection and Anglo American groups. cutbacks, based as they are on the bumper production in the first half of 1959 that was aimed at catching up on the losses caused by last autumn's strike, will bring down the amount of royalty copper to below that of the September quarter of 1958.

The upshot of all this is that Chartered looks like netting in the year to next September a royalty income that will be upwards of £2,000,000 higher than last year and should at the same time make more out of its investment revenue. Here is a clear enough indication that the company should be able further to raise its distribution above the effective rate of 5s. 3d. per 15s. stock unit paid for 1957-58. The first indication of the extent of the rise may come with the interim early in September. Meanwhile, the units at 93s. 3d. offer a current yield of 5.6 per cent.

Other Mining Items.—Other mining news this week has included a decision by Rhokana, the Northern Rhodesian copper producer in the Anglo American Corporation group, to close down its uranium plant on July 31. High production costs allied to a present world surplus of uranium have caused this decision. A small profit has been made on the uranium produced since the plant started up in May, 1957, and expenditure on the plant is stated to have been recouped. So no harm will have come to Rhokana from this relatively small side venture.

From Malaya has come news of the starting up of Malayan Tin Dredging's big new £1,000,000 dredge on its Kampong Gajah property. The company stated last December that it should receive an assessment under the International Tin Agreement that should enable the new dredge to work at a profit. Full benefits therefrom must, of course, await the end of output restriction.

National Mining is spreading its interests by acquiring the share capital of a small industrial undertaking, British Patent Glazing, which specialises in the manufacture of a patented glazing bar "of almost universal application". Cash purchase price is £80,500. The glazing company's net annual profit before tax is stated to have averaged £25,000 during the past three years and net assets at December 31 last were £47,000. National Mining 2s. 6d. shares stand at 3s. 3d. No dividend has been paid since 10 per cent for one year to March 31, 1956.

DAVIES INVESTMENTS LTD., Bankers, still offer 7½ per cent on sums £20 to £500 (withdrawal on demand) with extra ½ per cent on each £500 unit. Details from Investment Dept. MN, Davies Investments Ltd., Danes Inn House, 265 Strand, London, W.C.2.

THE STANDARD BANK OF SOUTH AFRICA LTD.

Sir Edmund Hall-Patch on Africa's Needs

The 146th Ordinary Meeting (being the Annual General Meeting for the year 1959) of The Standard Bank of South Africa Limited was held on July 29 in London, **Sir Edmund Hall-Patch, G.C.M.G.** (the Chairman) presiding.

The following is an extract from his circulated statement :—

After making the necessary provisions the profit for the year is £1,080,864. The balance brought forward from last year's account is £479,021 so that we have £1,559,885 to deal with. We have allocated £100,000 to the Reserve Fund which, with the addition of £1,490,000 to the share premium account arising from our recent capital issue, now stands at £10,440,000. The amount written off bank premises is £50,000 and there remains £1,409,885 for disposal.

An interim dividend of 1s. (5 per cent), less tax, per share was paid in January last on 9,160,000 shares and, as was forecast when the offer of new shares was made in February, 1959, your Directors are now able to recommend that a final dividend of 1s. 9.6d. (9 per cent), less tax, per share be paid on the increased capital of 11,000,000 shares, leaving £540,160 to be carried forward to the next accounts, compared with £479,021 brought in.

The Chairman then reviewed conditions in the Union of South Africa, The Federation and East Africa.

Commenting on future prospects the Chairman said :—

The difficulties facing the various parts of Africa are infinite in their variety and complexity. Some are common to all the territories in which we operate : they are those of societies of different racial origin and varying levels of cultural development in a period of rapid political evolution.

These territories run the whole gamut from that of a fairly simple agricultural economy to that of a developing industrial society based on vast mineral resources and backed by a progressive agricultural community already geared to producing for export. All seek a faster tempo of development and all require an ever larger inflow of capital.

This capital inflow will not take place, either in the volume or with the regularity required, without an assurance of political stability. This stability may well be jeopardised if the rising fever of racialism and nationalism are not reduced by wise guidance from the political leaders of all racial groups. It rests with them to convince their supporters that the prosperity of their country, and of all its peoples, depends on co-operating with other races to advance common interests.

Recent events have shown all too clearly the nature and the range of the difficulties ahead, but they have also brought a greater awareness of the problems to be faced and a greater sense of urgency in seeking solutions. Those who look back and measure the enormous strides made in Africa in the last fifty years have little doubt that solutions for present difficulties will be found and that this progress will continue. To provide a solid basis for this progress greater emphasis will be necessary in future on furthering the economic, social and political evolution of the indigenous races.

This Bank will make its contribution to this evolutionary process by continuing to provide efficient banking facilities in the years ahead to match the growing needs of all races.

The report and accounts were adopted.

G. F. AUSTRALIAN DEVELOPMENT CO., LTD.

Chairman's Statement

The Twenty-sixth Annual General Meeting of Gold Fields Australian Development Company Limited was held July 23 in London.

Mr. R. H. A. Neuschild, Chairman, in the course of his speech said :—

Gentlemen,

The financial results of the year's operations at the Mount Ida Gold Mine are clearly set out in the Annual Report and Accounts. As the Mine is coming to the end of its life, to go into comparative figures of costs, etc. would be of no significance.

Our yardstick as to results is the increase in the group net cash assets at the end of each financial period to December 31, and in 1958 when 35,659 tons of ore were milled for the production of 15,474 oz. of gold, the increase amounted to £73,869.

At the Extraordinary General Meeting which will follow this Meeting, we, propose the repayment of a further 1s. per Gold Fields Australian share. If this is approved by you, and receives the sanction of the High Court, we shall have returned 4s. per original 5s. share. In view of the long vacation of the Courts it is unlikely that it will be possible to make the actual payment until end October or early November.

The estimated remaining ore at December 31, 1958, was 33,000 tons, but to June 8 16,492 tons were treated, so that statistically there is not much ore left. Tonnage throughput from now on could vary from period to period and, particularly near the end of the operation, it may not be possible to maintain 2,750 tons per period. There is a possibility of finding sufficient ore to permit of milling to the end of 1960. aithough it does not follow that it will be with earnings at the present rate.

The Report and Accounts were adopted and at a subsequent Extraordinary General Meeting resolutions relating to the reduction of capital were approved.

The Proprietors of Patent No. 750390 for "Explosive Composition and Production thereof," desire to secure commercial exploitation by Licence in the United Kingdom. Replies to Haseltine Lake & Co., 28 Southampton Buildings, Chancery Lane, London W.C.2.

AREA MANAGER (MINING ENGINEER) required for Tin and Columbite Mining Company in Northern Nigeria. Applicant must be qualified A.R.S.M. or A.C.S.M. Drive and initiative are essential with ability to control labour. Some mechanical knowledge an advantage. Age preferably 30-40. 18 months tours with three months leave on full pay. Free passage for self and family, accommodation and medical attention ; Provident Fund. Salary £90 - £100 per month according to calibre and experience ; cost-of-living allowance. Apply stating full particulars experience and age to Box 304, Walter Skinner Ltd., 20 Copthall Avenue, London E.C.2.